Таблица интегралов

1. $\int du = u + C$

2. $\int u\,du = \frac{u^2}{2} + C$

3. $\int u^n\,du = \frac{u^{n+1}}{n+1} + C\ (n \neq -1)$

4. $\int e^u\,du = e^u + C$

5. $\int a^u\,du = \frac{a^u}{\ln a} + C$

6. $\int \frac{du}{u} = \ln|u| + C\ (u \neq 0)$

7. $\int \sin u\,du = -\cos u + C$

8. $\int \cos u\,du = \sin u + C$

9. $\int \operatorname{tg}\,u\,du = -\ln|\cos u| + C$

10. $\int \operatorname{ctg}\,u\,du = \ln|\sin u| + C$

11. $\int \frac{du}{\cos^2 u} = \operatorname{tg}\,u + C$

12. $\int \frac{du}{\sin^2 u} = -\operatorname{ctg}\,u + C$

13. $\int \frac{du}{\cos u} = \ln\left|\operatorname{tg}\left(\frac{u}{2} + \frac{\pi}{4}\right)\right| + C$

14. $\int \frac{du}{\sin u} = \ln\left|\operatorname{tg}\,\frac{u}{2}\right| + C$

15. $\int \frac{du}{\sqrt{a^2 - u^2}} = \arcsin\frac{u}{a} + C$

16. $\int \frac{du}{\sqrt{u^2 \pm a^2}} = \ln|u + \sqrt{u^2 \pm a^2}| + C$

17. $\int \frac{du}{a^2 + u^2} = \frac{1}{a}\operatorname{arctg}\frac{u}{a} + C$

18. $\int \frac{du}{a^2 - u^2} = \frac{1}{2a}\ln\left|\frac{a+u}{a-u}\right| + C$